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ABSTRACT

This study examined the relation between part-time employment and adolescent behavior and development in a multi-ethnic, multi-class sample of approximately 4,000 15- through 18-year-olds. The results indicated that long work hours during the school year were associated with diminished investment in schooling and lowered school performance, increased psychological distress and somatic complaints, higher rates of drug and alcohol use, higher rates of delinquency, and greater autonomy from parental control. Workers did not have any advantages over nonworkers with respect to self-reliance, work orientation, or self-esteem. The correlates of school-year employment were closely linked to the number of hours worked each week and generally cut across ethnic, socioeconomic, and age groups, although the association between hours of employment and poor school performance was clearer among White and Asian-American adolescents than their peers. Nevertheless, in no ethnic or socioeconomic group were the correlates of employment positive, either in terms of lower rates of dysfunctional behavior, better school performance, or enhanced psychosocial well-being. These and similar findings from previous research suggest that parents, educational practitioners, and policy-makers should continue to monitor the number of weekly hours adolescents work during the school year. (Author)

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Negative Correlates of Part-Time Employment During Adolescence: Replication and Elaboration

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Abstract

This study examines the relation between part-time employment and adolescent behavior and development in a multi-ethnic, multi-class sample of approximately 4,000 15- through 18-year-olds. Long work hours during the school year are associated with diminished investment in schooling and lowered school performance, increased psychological distress and somatic complaints, higher rates of drug and alchohol use, higher rates of delinquency, and greater autonomy from parental control. Workers do not have any advantages over nonworkers with respect to self-reliance, work orientation, or self-esteem. The correlates of school-year employment are closely linked to the number of hours worked each week and generally cut across ethnic, socioeconomic, and age groups, although the association between hours of employment and poor school performance is clearer among White and Asian-American youngsters than their peers. Nevertheless, in no ethnic or socioeconomic group are the correlates of employment positive, either in terms of lower rates of dysfunctional behavior, better school performance, or enhanced psychosocial well-being. In light of these and similar findings from previous research, we believe that parents, educational practitioners, and policy-makers should continue to monitor the number of weekly hours adolescents work during the school year.

During the last decade, researchers, educators, and policy-makers interested in the development of adolescents have directed increasing attention to the widespread employment of high school students during the school year (see Charner & Fraser, 1987, for a review). Uncommon in this country prior to 1950, and still rare in other industrialized countries, student employment in the United States grew steadily between 1950 and 1980 and has remained at a high level during the last 10 years. According to recent estimates, for example, between one-half and two-thirds of all high school juniors hold jobs in the formal part-time labor force at any specific time during the school year, and the vast majority of students will have had some school-year work experience prior to graduation (Greenberger & Steinberg, 1986). For many students, participation in the labor force is time-consuming: according to one national survey, over half of all employed high school seniors and nearly one-fourth of all employed sophomores work more than 20 hours per week (Lewin-Epstein, 1981).

Some ten years ago, Greenberger and Steinberg published a series of reports calling attention to the phenomenon of student employment, and raising concerns about the possible deleterious consequences of labor force participation during high school (Greenberger & Steinberg, 1981; Greenberger, Steinberg, & Vaux, 1981; Steinberg, Greenberger, Garduque, & McAuliffe, 1982; Steinberg, Greenberger, Garduque, Ruggiero, & Vaux, 1982). Their studies indicated that extensive involvement in the labor force

during the academic year -- employment in excess of 15-20 hours per week -- was associated with diminished school performance and school involvement, and led to increased drug and alcohol use, decreased closeness to parents, and the development of cynical attitudes toward work itself. They found modest positive effects of work on youngsters' psychosocial development, but, interestingly, these effects were not hours-related; youngsters who worked only a few hours per week scored comparably to those who worked a great deal. On the basis of these findings, the authors argued that student employment should be more carefully scrutinized and students' work hours more closely regulated (Greenberger & Steinberg, 1986).

Numerous other studies of student employment and its impact on schooling have now been conducted (see Charner & Fraser, 1987), some replicating the negative effect of working on schooling (e.g., McNeil, 1984; Mortimer & Finch, 1986), others calling this finding into question (e.g., Barton, 1989; Hochkiss, 1986; Lewin-Epstein, 1981). Discrepancies among these studies appear to be due mainly to two factors: (1) whether work status or hours of employment is the issue of inquiry, and (2) the way in which school-related outcomes are assessed. With respect to the first, studies that simply contrast workers and nonworkers rarely uncover significant employment effects, whereas those that contrast students who work long hours with those whose time commitment is more modest, do. The emerging consensus among researchers is that the negative effects of employment are linked

to how much, not whether, a student works (e.g., Bachman, Bare & Frankie, 1986; Damico, 1984; Mortimer & Finch, 1986; Schill, McCartin, & Meyer, 1985; Wirtz, Rohrbeck, Charner, and Fraser, 1987). Studies that examine weekly hours of employment generally find an important break-point in school performance at around 20 hours per week.

The second source of discrepancy concerns the index of schooling examined. Studies that focus solely on differences in school performance, without examining other aspects of youngsters' involvement in school, may underestimate the impact of working on schooling, because there are inherent, institutionalized constraints on the range of youngsters' grades and on the amount of time they are expected to devote to homework (Greenberger & Steinberg, 1986). For example, because the national average for time spent on homework is less than four hours per week (Greenberger & Steinberg, 1986), it is unlikely that employment, in whatever amount, will markedly diminish youngsters' already very modest involvement in homework. Similarly, because teachers adjust grading practices and class requirements, and pupils select easier courses in order to accomodate job demands (McNeil, 1984), the ultimate impact of employment on school performance may be attenuated. Studies that examine more affective and attitudinal components of schooling -- how invested students are in their education -- may uncover stronger effects of extensive employment than studies of performance or time use.

Much less research has examined other, noneducational outcomes of student employment, but a number of scattered findings are of interest. First, drug and alcohol use is higher among workers than nonworkers, especially among students who work long hours (e.g., Bachman et al., 1986; Greenberger, Steinberg, & Vaux, 1981). Second, employment does not appear to deter delinquent activity (Gottfredson, 1985); indeed, at least two studies suggest that among middle-class youngsters, working may actually increase deviant behavior (Ruggiero, 1984; Shannon, 1982). Finally, it does not appear as if working during high school has substantial impact on youngsters' psychosocial development or self-esteem (Bachman et al., 1986; Greenberger & Steinberg, 1986), despite conventional wisdom to the contrary (cf. Stephens, 1979). To our knowledge, no recent studies have examined the impact of work on adolescent family relations or work-related attitudes, but there has been some suggestion in the literature that working is associated with diminished parental authority over adolescent behavior (Greenberger & Steinberg, 1986).

Given continued public interest in student employment and its effects (Barton, 1989), the equivocal nature of the findings concerning the effect of employment on schooling, and the general dearth of research on work and other outcome variables, we undertook an extensive replication of much of the original Greenberger and Steinberg research. The present study departed from that earlier work in two important respects, however.

First, whereas the earlier work was an intensive study of a relatively small number of workers (approximately 200) and a matched sample of nonworkers, the present investigation focuses on a sample of approximately 4,000 students. Second, whereas the earlier sample was composed of a relatively homogeneous group of suburban, Orange County, California students, the present sample is a socioeconomically and ethnically diverse sample of students from rural, suburban, and urban high schools in Wisconsin and California. Finally, whereas the initial research focused on adolescents holding their first paid part-time job, this study includes students with a variety of work histories.

In the present study, we examine the relation between weekly hours of employment and four sets of behavioral and psychological phenomena. First, we examine a number of behavioral and attitudinal indices of school performance and involvement, including not only grades and time spent on homework, but indicators of classroom engagement, school misconduct (e.g., cheating, copying assignments), and extracurricular participation. Our aim was to include an array of possible indicators of school engagement in view of the inconsistencies evident in studies of grades alone. Second, given previous studies linking extensive employment to higher rates of both psychological distress and deviance, we examine several aspects of psychological and behavioral dysfunction, including psychological and somatic symptoms, drug and alcohol use, and involvement in delinquent activity. Third, in light of the

hypothesis that student employment undermines parental authority, we investigate the relation between student employment and autonomy from parents, including time spent in family activities, the extent of parental monitoring, and the extent of autonomous decision-making. Finally, given the widespread belief that employment facilitates the development of personal responsibility and positive self-conceptions, we look at several indices of adolescent psychosocial development, including self-reliance, work orientation, and self-esteem.

Method

Sample

The sample for the present analysis is a subsample of students participating in an extensive investigation of high school achievement. All students in attendance at nine high schools (six in Northern California and three in Wisconsin) were surveyed in their classrooms in Fall, 1987 and Spring, 1988 on a wide range of topics, including school performance and engagement, family and peer relations, extracurricular participation, and part-time employment. In addition, the questionnaires included standardized measures of psychosocial development and a series of questions about psychological health, drug and alcohol use, involvement in delinquent activity, and information on family background characteristics, including ethnic origin and parental educational attainment. Approximately 10,000 students from grades nine through twelve completed the Fall, 1987 questionnaire (approximately 80% of the students

enrolled in these schools, or approximately 90% of the students in attendance on the day of testing), and approximately 70% of these students were reexamined five months later, in the spring of 1988. The reader should note that the analysis presented here is not longitudinal, as the questionnaires did not contain overlapping items (see below).

Of the 7,000 students who completed both questionnaires, approximately 5,300 provided complete information concerning their employment status, including the nature of their job and their weekly work hours. (Because the questions concerning employment were at the end of the questionnaire, not all students completed these items. In all likelihood, this, as well as the fact that we do not have data from students who were absent on the day of testing, reduced the proportion of low-achieving students in the sample. Presumably, this limits the variability of scores on measures of school-related behaviors and attitudes and makes it more difficult to find relations between employment and measures of schooling.)

Preliminary analyses indicated, as expected, that very few ninth-graders were employed, and that those who were working were unlikely to be employed in excess of ten hours weekly. Because a main focus of our analysis was on the correlates of intensive employment, ninth-graders were dropped from the analysis, leaving a study sample of 3,989. Characteristics of this sample are presented in Table 1. As the Table indicates, the sample is equally divided between males and females, and among sophomores,

juniors and seniors; from households that vary with respect to parental educational levels; and two-thirds non-Hispanic white (8% of the sample is African-American, 14% Asian-American, and 9% Hispanic-American).

Table 1 About Here

Measures

Of interest in the present analysis are four sets of outcome measures: (1) school performance and engagement; (2) psychological and behavioral dysfunction; (3) autonomy from parents; and (4) psychosocial development.

School performance and engagement. Ten indices of school performance and engagement were assessed. Students provided information on their current grade-point-average, the average amount of time spent on homework each week for each major subject class (the homework index is averaged across the major subject classes), their frequency of unexcused absence (cutting class) for each major subject class (averaged across classes), their weekly hours of extracurricular participation, their frequency of school misconduct (cheating, copying homework, etc.; alpha=.68), the extent to which they concentrate hard in class (averaged across major subject classes), pay attention in class (averaged across major classes) the extent to which they exert maximum effort in class (averaged across major classes), and the extent to which they report mind-wandering in class (averaged across

major classes). In analyses of data from a different sample of 5,000 students attending several of the same schools studied here, Dornbusch et al. (1987) report that the correlation between self-reported GPA and school-reported GPA is nearly .80.

In addition to these indices of school performance and engagement, respondents completed a 6-item scale (alpha=.69) designed to assess the youngster's orientation toward school (sample items: "The best way to get through most days at school is to goof off with my friends"; "I'm losing interest in school because my teachers keep going over the same old thing") (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). This latter variable, which assesses the degree to which the student values and is committed to school, was used as a covariate in the analyses concerning school performance and engagement (see Plan of Analysis, below).

Psychological and behavioral dysfunction. Four measures were used to assess psychological and behavioral dysfunction. A series of items from the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) were used to form indices of psychological symptoms (anxiety, depression, tension, fatigue, insomnia, etc.) (alpha=.88) and somatic symptoms (headaches, stomach aches, colds, etc.) (alpha=.67). Respondents also provided information on their frequency of cigarette, alcohol, marijuana, and other drug use (used to form an index of drug and alcohol use, alpha=.86) (Greenberger, Steinberg, & Vaux, 1981) and on their frequency of involvement in such delinquent

activities as theft, carrying a weapon, vandalism, and using a phony I.D. (used to form an index of delinquent activity, alpha=.82) (Gold, 1980).

Autonomy from parents. Three indices of autonomy from parents were examined in the present analyses. Respondents completed a nine-item measure of behavioral control (alpha=.76), which taps the extent to which the adolescent is monitored by his or her parents (cf. Patterson and Stouthamer-Loeber, 1985); a 13-item measure of family decision-making, which is used to compute an index of the extent to which the adolescent is given decision-making autonomy over such matters as curfew, money management, dating, and leisure activities (alpha=.82; see Dornbusch et al., 1985 and Steinberg, 1987, for similar measures); and a five-item index of family time (McCubbin, McCubbin, & Thompson, 1987), which assesses the frequency of joint family activity, including contact in the evenings and during the dinner hour (alpha=.71).

Psychosocial development. Respondents completed the self-reliance and the work orientation subscales of the Psychosocial Maturity Inventory (Form D; Greenberger, Josselson, Knerr, & Knerr, 1974; Greenberger & Bond, 1986; alphas=.81 and .73, respectively), as well as a ten-item measure of self-esteem adapted from Rosenberg (1965; alpha=.87).

Most of the measures used in the present analysis derive from the Fall questionnaire, which included questions about employment, all of the measures of psychological and behavioral dysfunction, most of the measures of school performance (the

exceptions are extracurricular participation, classroom concentration, classroom effort, and orientation toward school), two of the three measures of autonomy from parents (the exception is family time), and the measure of self-esteem (the measures of self-reliance and work orientation were included on the Spring questionnaire.) Most of the analyses, therefore, assess the contemporaneous relation between part-time employment and adolescent behavior and development. The analyses concerning the remaining measures (i.e., those assessed on the Spring questionnaire) assess the relation between part-time employment early in the school year and adolescent behavior and development five months later.

Although the data were collected on two separate occasions, in no case did the assessment of a dependent measure precede the assessment of employment. Any interpretations of differential patterns of relations found between working and outcome variables assessed at different points in time, however, must take into account the fact that some outcomes were assessed contemporaneously with the assessment of work status, while other were assessed five months later.

Plan of Analysis

Four multiple analyses of variance (MANOVA) were carried out in order to examine the relation between weekly hours of employment and the outcome variables of interest. In each analysis, hours of employment was treated as a five-level variable, with the following categories: not employed (N=2212),

employed 1-10 hours weekly (N=531), employed 11-15 hours weekly (N=340), employed 16-20 hours weekly (N=413), and employed more than 20 hours weekly (N=493).

The decision to use this particular categorical scheme was based on our reading of the existing literature. With regard to the two upper categories, for example, previous studies suggest that 20 hours of employment per week may be an important threshold beyond which adverse scholastic consequences appear for older students, whereas 15 hours per week may be an important threshold for younger students (e.g., Steinberg, Greenberger, Garduque, & McAuliffe, 1982). With regard to the lower category, several studies suggest that working less than 10 hours per week poses little risk to most high school students. In light of debates about the hours provisions of current child labor laws, it seemed appropriate to include a middle category (11-15 hours per week) in order to try to "fine tune" the distinction between potentially harmless and potentially harmful work schedules.

Moderating factors. The size of the present sample permitted us to examine whether the relations between work hours and the outcome measures of interest varied as a function of student grade level, ethnicity, and socioeconomic status. Socioeconomic status was indexed in terms of the mean educational level of the parents in the adolescent's household, and three socioeconomic groups were formed: less than high school completion; less than four-year college completion; and college completion or higher. Ethnicity was coded in five categories:

African-American, Asian-American, Hisanic-American, White, and other (chiefly Pacific Islanders and American-Indians).

Each set of MANOVAs was repeated three times, once with the interaction between work hours and grade level in the design; once with the interaction between work hours and socioeconomic status in the design; and again with the interaction between work hours and ethnicity in the design. Exploratory analyses conducted within grade levels revealed few third-order interactions among hours of work, grade level, and either socioeconomic status or ethnicity. Unfortunately, the strong correlation between parental education and ethnicity in the sample resulted in small and unequal cell sizes that prohibited the examination of third-order interactions between hours of work, socioeconomic status, and ethnicity.

Orientation toward school as a covariate. A number of investigators have suggested that apparent differences between students who do, and do not, work long hours may be attributable to pre-work differences in attitudes and values, particularly, in attitudes and values concerning education (e.g., Barton, 1989). Their argument is that youngsters who choose to work long hours are less interested in school than their peers and, accordingly, that any differences between them and their agemates with respect to school performance merely reflects this difference in orientation.[1] In order to take this possibility into account, we conducted the analyses of school outcomes both with, and without, our index of youngsters' orientation toward school, which was

assessed on the Spring questionnaire. While this, of course, does not rule out the possibility that other, unmeasured attitudinal differences may be operative, controlling for youngsters' orientation toward school gives additional confidence to the results.[2]

Post-hoc contrasts. In light of our interest in examining whether clear hours thresholds exist beyond which the correlates of working are markedly different, we conducted a series of post-hoc Scheffe tests to examine specific contrasts between workers in adjacent hours categories.

Results

School Performance and Engagement

The results of the first MANOVA indicate that longer hours of work during the school year are associated with diminished school performance and lowered school engagement (multivariate $F(4,3984)=6.54$, $p<.0001$). Students who work more hours each week earn lower grades, spend less time on homework, pay attention in class less often, exert less effort in school, and are less involved in extracurricular activities, and they report higher levels of mind-wandering in class, more school misconduct, and more frequent class-cutting (all univariate Fs significant at $p<.0001$ with the exception of classroom effort and school misconduct, each significant at $p<.001$, and classroom attention, significant at $p<.05$; see Table 2). Curiously, although nonworkers report less misconduct than other students, the highest rates of school misconduct are reported among students

who work moderate, rather than long hours. No effects are found for classroom concentration.

When the analysis is repeated with orientation toward school as a covariate, the results are virtually identical, with the only change involving classroom attention; the significant differences on this variable observed in the initial analysis are not found once orientation toward school is controlled. Overall, then, the results suggest that the poorer school performance and lower school engagement of youngsters who work a great deal are not attributable to their weaker orientation toward school.

In two cases -- grade-point-average and time spent on homework -- the results of the post-hoc contrasts suggest that a significant drop-off in school performance occurs after 20 hours of weekly employment (see Figures 1a and 1b). In the other cases, however, the relation between school engagement and hours of employment is more or less linear (See Figure 1c, for an illustration).

Although neither the interaction between hours of employment and grade level nor between hours of employment and socioeconomic status is significant (for both Fs, $p>.05$), the interaction between hours of employment and ethnicity is (multivariate F (16, 3898=1.27, $p<.05$). This effect, which is not diminished when the analysis is repeated with orientation toward school controlled, is entirely due to the relation among hours of employment, ethnicity, and GPA. Follow-up analyses indicate that the negative relation between work hours and GPA is signifant among

White and Asian-American students (both ps<.001), but not among African-American or Hispanic-American students (both ps>.10).[3]

Table 2 and Figures 1a, 1b, and 1c About Here

Psychological and Behavioral Dysfunction

Longer hours of employment are associated with higher levels of psychological and behavioral dysfunction (multivariate F (4,3984)=9.53, p<.001). Specifically, youngsters who work more hours each week report higher rates of drug and alcohol use, higher rates of delinquency, and higher levels of psychological and psychosomatic distress (all univariate Fs significant at p<.001; see table 3). Post-hoc contrasts of adjacent groups reveal only one significant contrast, in the analysis of drug use. Here we find a significant difference between workers who work 1 to 10 hours each week and those who whose time commitment is greater (see Figure 2a). The relations between hours of work and delinquency, psychological distress, and psychosomatic distress are more or less linear (for an illustration, see Figure 2b).

The interactions between work hours and socioeconomic status, ethncity, and grade level in the prediction of psychological and behavioral dysfunction were not significant, indicating that the negative relation between work hours and students' psychological well-being cuts across demographic and age groups.

Table 3 and Figures 2a and 2b About Here

Autonomy from Parents

As hypothesized, youngsters who work longer hours have more autonomy from their parents (multivariate F (4,3989)=14.17, p<.001). Students who work more hours each week spend less time in joint family activities, are monitored less closely by their parents, and are granted higher levels of autonomy over day-to-day decisions (all univariate Fs significant at p<.001; see Table 4). None of the post-hoc contrasts between adjacent groups reached significance, suggesting that the relation between hours of work and autonomy from parents is more or less linear (see Figure 3, for an illustration).

The interaction between socioeconomic status and work hours in the prediction of autonomy from parents was significant multivariate F (8,3551)=1.54, p<.05). Inspection of the results of univariate tests indicates that the interaction is due to the specific effect of the interaction between socioeconomic status and work hours on autonomy over day-to-day decisions (F (8,3551)=1.84, p=.06). Follow-up analyses indicate that the relation between increased autonomy and longer work hours holds only among students whose parents are college-educated.

Neither the interaction between ethnicity and work hours nor the interaction between grade level and work hours in the prediction of autonomy from parents was significant.

Tables 4, 5, 6 and Figure 3 About Here

Psychosocial Development

The relation between psychosocial development and hours of employment is statistically significant (multivariate $F(4,3984)=2.22$, $p<.01$), but only the univariate effect for self-esteem reaches statistical significance. Inspection of the group means indicates that the highest self-esteem is reported by students who work fewer than 10 hours each week, whereas the lowest is reported by students who work in excess of 20 hours weekly. The post-hoc contrast betwen adjacent groups' scores on the measure of self-esteem was not significant, however.

The interactions between socioeconomic status, ethnicity, grade level and work hours in the prediction of psychosocial outcomes were not significant.

Effect Sizes

The magnitude of differences among students who work varying degrees can be gleaned from Table 6, which presents means and standard deviations for each of the outcome variables, as well as the d statistic for the contrast between students who work in excess of 20 hours weekly and those who work between 1 and 10 hours weekly. This contrast was chosen because it emphasizes the difference between extensive and modest employment -- in our view, the central issue in discussions of the costs and benefits of adolescent employment.[4]

As Table 6 indicates, the magnitude of the difference between workers with extensive versus modest involvement in work varies considerably as a function of the outcome variable assessed. The greatest differences are in certain areas of school performance (specifically, grade-point-average, time spent on homework, and class-cutting), drug use, psychological distress, and the various indicators of autonomy from parental control. Differences with respect to other variables, while statistically significant, are far more modest.

Discussion

In recent years, a good deal of attention has been focused in the popular press on the poor academic achievement of American high school students relative to their counterparts in other industrialized nations, on the widespread use of drugs and alcohol among the young, and on the continuing erosion of parental authority over the behavior of adolescents. Although teenage employment is unlikely to be a major cause of these ills, the present investigation, along with previous research, suggests that it may well be a contributing factor. Contrary to the popular belief that working during adolescence is beneficial to young people's development, the findings presented here indicate that the correlates of school year employment are generally negative.

Compared with their classmates who do not work, or who work only a few hours each week, students who work longer hours report diminished engagement in schooling and lowered school

performance, increased psychological distress and somatic complaints, higher rates of drug and alchohol use, higher rates of delinquency, and greater autonomy from parental control. Workers do not have any advantages over nonworkers with respect to psychosocial development. In general, the deleterious correlates of employment increase as a direct function of the number of hours worked each week.

The present study, like earlier ones, suggests that debates over the employment of high school students should focus specifically on the number of hours students work each week, since the negative correlates of employment are related to the amount of time spent in the labor force. Unfortunately, with few exceptions, the analyses presented in this study do not reveal clear hours thresholds beyond which the correlates of employment become dramatically more negative. The most prudent interpretation of these data, therefore, suggests simply that the potential risks of employment during the school year increase with increasing time commitment to a job.

The observed association of long work hours with diminished school performance and engagement both replicates and extends the findings of several previous studies. We find, as have others, that students who work long hours do less well in school than their peers. Differences in grades and in time spent on homework between adolescents employed more than 20 hours per week and those who work less are especially marked, and of sufficient magnitude to warrant concern. Indeed, our analysis of effect

sizes indicates that these differences are not trivial, according to conventional standards of effect size interpretation. On average, students who work more than 20 hours weekly have grade-point-averages that are about one-third of a letter grade lower than their peers who work 10 hours a week or less. It appears, however, that the negative relation between student employment and school grades is limited to White and Asian-American students. In this sample, the Asian-American and White students have higher grade-point-averages than the African-American or Hispanic-American students, which may help to account for this differential pattern of findings. Higher-achieving students have more to lose academically by working long hours.

Our results also extend the debate about the potential costs of student employment to schooling in two noteworthy ways. First, our findings indicate that working may take its toll on what occurs in the classroom, with students who work longer hours reporting more mind-wandering and exerting less effort in school -- even after taking into account their overall orientation toward school. Although our strategy of controlling for this attitudinal variable is imperfect -- because it was measured five months after our assessment of work status -- the results caution against dismissing the negative relation between working and schooling as only an artifact of differential selection. Furthermore, anecdotal evidence from teachers (e.g., Kotlowitz, 1986) and ethnographies of high schools (e.g., Powell et al., 1985) corroborate our suspicion that extensive commitment to a

part-time job takes a toll on students' investment in school in ways that may not be evident when only "objective" indicators are studied.

Second, our results suggest that student workers may attempt to compensate for their job commitments through such deviant activities as cheating, copying assignments, and cutting classes when convenient. As has been speculated elsewhere (Greenberger & Steinberg, 1986; McNeil, 1984), these behaviors may permit student workers to reduce the deleterious effects of working on their school grades. Thus, while some writers have dismissed the achievement differences between workers and nonworkers as too small to be worrisome (e.g., Barton, 1989), factors such as grade inflation (the average student in our sample has close to a B average), minimal homework demands (the average student in our sample reports less than one hour of homework per day), and the capability of students to protect their grades through deviant activities probably attenuate the true magnitude of effects.

The present study also replicates other work indicating that working long hours is associated with higher rates of drug and alcohol use, higher rates of delinquency, and more frequent psychological and psychosomatic distress. With respect to drug and alcohol use, we find an important break-point between students who work 10 hours weekly and those who work more. The analysis of effect sizes indicates that the magnitude of the difference in drug use and in psychological distress between students who work more than 20 hours weekly and those who work

fewer than 11 is not trivial.

Although an explanation focused on differential selection is plausible with respect to the drug use findings (i.e., that students who use drugs are more likely to want to work in order to earn money), such an explanation is far less compelling with respect to psychological and somatic distress: We would not expect anxious or sickly students to be more likely to take jobs and more likely to work longer hours. Several alternative hypotheses have been advanced to account for the greater reports of dysfunction and distress among students who work long hours, including (1) that workers have more discretionary income than nonworkers and use this income to engage in deviant or illegal activities, which in turn induces distress (e.g., Bachman, 1983; Greenberger, Steinberg, & Vaux, 1981); (2) that workers experience more stress than nonworkers and may turn to alcohol, drugs, and deviant behavior as a consequence (e.g., Greenberger et al., 1981); and (3) that workers may have more contact with older adolescents and young adults, who may expose them to illicit activities (Greenberger & Steinberg, 1986).

Little previous work had examined the relation between student employment and adolescent autonomy from parental control. The results of the present study support the hypothesis that adolescents who work have more independence from their parents, and the analysis of effect sizes indicated that these differences are noteworthy. Possible explanations for the greater independence of workers, warranting further study, are that (1)

adolescents who are more autonomous from their families choose to work longer hours than their less independent peers; (2) the greater income available to adolescents who work a great deal may "buy" independence from parental influence, not only psychologically, but physically, since much of the money earned by teenagers goes toward car-related expenses (see Greenberger & Steinberg, 1986); and (3) students who work long hours spend more afternoons and evenings away from their parents, which may increase their autonomy.

At least one previous investigation has reported that working may have a positve impact on the development of a healthy work orientation and, to a lesser extent, self-reliance (Steinberg et al., 1982). The present study, in contrast, does not indicate differences in work orientation or self-reliance among youngsters with differing degrees of involvement in the workplace. Because these variables were assessed five months after the assessment of employment status, however, the failure to find a relation between employment and psychosocial maturity is difficult to interpret. (We note, however, that relations between work status and other outcome measures assessed on the Spring questionnaire <u>were</u> observed.) On the one hand, if working genuinely facilitated psychosocial development, the effects should persist over a five month period. If, however, a large number of the nonworkers entered the labor force between Fall and Spring, and if their work orientation or sense of self-reliance did increase as a result, any differences between students who

initially were counted as workers and those who were not would be obscured. To the extent that our measure of self-esteem, which was measured concurrently with work status, indexes a related aspect of psychosocial functioning, the present findings suggest that the relation between employment and psychosocial functioning is quite modest and not a direct function of hours of employment. This is in line with other research on work and self-esteem (Bachman et al., 1986).

Although one of the strengths of this study is its large and heterogeneous sample, the conclusions one can draw from the research are limited by its cross-sectional design and reliance on self-report data. It is not possible to rule out the arguments that the results merely reflect differential selection into the workplace, or differential reporting by workers and nonworkers -- of grades, drug use, and so forth -- rather than genuine effects of employment. While longitudinal analysis is necessary to provide a clearer test of the hypothesis that working actually has adverse consequences, cross-sectional studies such as this play an important role in providing the basis for sensible hypothesis formulation. Similarly, although our findings would be strengthened by the inclusion of additional, "objective" indices of the dependent measures, doing so would necessitate the use of a smaller sample and preclude analyses of the moderating impact of ethnicity and class. Ultimately, large-scale self-report surveys such as this must be complemented by smaller-scale research that employs multiple

methods and multiple sources of information.

These caveats notwithstanding, the results of this investigation provide replication, in a contemporary, multiethnic sample, of findings reported by several other investigators, most notably, Greenberger and Steinberg (1986). Perhaps most importantly, the present study examined whether the correlates of student employment vary as a function of ethnicity, socioeconomic status, and grade level -- a question of interest to those who argue that employment may benefit certain, but not all, groups of students. In view of such claims, it is particularly significant that, with very few exceptions, the negative correlates of extensive employment cut across age, socioeconomic, and ethnic groups. Moreover, in no group are the correlates of employment positive, either in terms of lower rates of dysfunctional behavior, better school performance, or enhanced psychosocial well-being. In light of these and similar findings from previous research, we believe that parents, educational practitioners, and policy-makers should continue to monitor the number of weekly hours adolescents work during the school year.

Footnotes

1. The correlation between hours of employment and orientation toward school, although significant, is quite small: $r(3989)=-.06$, $p<.001$).

2. We also conducted the analyses on the other outcome sets with and without controlling for students' orientation toward school, in case this measure tapped a more general value orientation that had more pervasive effects on students' behavior. None of the results was changed as a result of this strategy and, for the sake of simplicity, we report the results of analyses on nonschool outcomes without adjustment for this covariate.

3. We looked further to see if the differential relation between work hours and GPA across ethnic groups was an artifact of socioeconomic status by repeating the follow-up analysis with a modification. We collapsed the work hours categories into three groups (not employed, employed 1-15 hours weekly, and employed 16 or more hours weekly), which yielded cell sizes large enough to test for the three-way interaction between ethnicity, socioeconomic status, and work hours; the third-order term was not significant, however. In light of this, we conclude that the differential pattern of results observed is not an artifact of socioeconomic status.

4. The d statistic, a commonly used index of effect size, is computed as the difference between the means of the two groups in question divided by the average of the two groups' standard

deviation. According to convention, a *d* of .20 represents a "small" effect, a *d* of .50, a "medium" effect, and a *d* of .80, a "large" effect (Rosnow & Rosenthal, 1989).

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Table 1

Characteristics of Study Sample

	% of sample	% of nonworkers	% of workers with 20+ hours
Sex			
Male	47.3	48.2	50.1
Female	52.7	51.8	49.9
Grade Level			
Tenth	33.3	43.0	13.6
Eleventh	33.3	33.0	30.0
Twelfth	33.4	24.0	56.4
Parental Education			
Less than h.s.	6.3	6.3	9.9
Less than B.A.	16.3	16.0	21.2
College grad	40.6	39.7	44.9
Post-college	36.8	38.1	24.0
Ethnic Background			
Black	8.1	8.5	9.1
White	65.4	62.1	65.2
Hispanic	9.3	17.0	8.0
Asian	13.6	9.0	12.1
Other	3.6	3.5	5.6

Table 2

Summary of Multiple Analysis of Variance of Relation Between Weekly Hours of Work and School-Related Outcomes

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F
GPA	48.84	2078.70	12.21	.52	23.40***
HOMEWORK	135.20	4823.29	33.80	1.21	27.91***
CONCENTRATION	3.35	2964.97	.83	.74	1.12
EFFORT	13.40	2974.92	3.35	.74	4.48***
CLASS-CUTTING	34.89	1653.49	8.72	.41	21.02***
ATTENTION	6.51	2054.24	1.62	.51	3.16*
MIND-WANDERING	17.96	2821.17	4.49	.70	6.34***
EXTRACURRICULARS	28.72	5144.04	7.18	1.29	5.56***
SCHOOL MISCONDUCT	76.57	15938.21	19.14	4.00	4.78***

***$p<.001$

**$p<.01$

*$p<.05$

Note: Univariate F-tests with (4,3984) d.f.; Weekly hours of work treated as a five-level independent variable (Not employed; 1-10 hours; 11-15 hours; 16-20 hours; more than 20 hours).

Table 3

Summary of Multiple Analysis of Variance of Relation Between Weekly Hours of Work and Indicators of Psychological Dysfunction

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F
PSYCH. SYMPTOMS	2402.26	156653.03	600.56	39.32	15.27***
SOMATIC SYMPTOMS	215.65	38923.65	53.91	9.76	5.51***
DELINQUENCY	121.05	22931.00	30.26	5.75	5.25***
DRUG USE	1354.38	56408.27	338.59	14.15	23.91***

***$p<.001$

Note: Univariate F-tests with (4,3984) d.f.; Weekly hours of work treated as a five-level independent variable (Not employed; 1-10 hours; 11-15 hours; 16-20 hours; more than 20 hours).

Table 4

Summary of Multiple Analysis of Variance of Relation Between Weekly Hours of Work and Indicators of Autonomy from Parents

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F
FAMILY TIME	691.78	24467.08	172.94	6.14	28.16***
PARENTAL MONITORING	1.31	65.32	.32	.01	19.97***
AUTONOMOUS DECISIONS	3.90	234.71	.97	.05	16.57***

***$p<.001$

Note: Univariate F-tests with (4,3984) d.f.; Weekly hours of work treated as a five-level independent variable (Not employed; 1-10 hours; 11-15 hours; 16-20 hours; more than 20 hours).

Table 5

Summary of Multiple Analysis of Variance of Relation Between Weekly Hours of Work and Indicators of Psychosocial Development

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F
SELF-RELIANCE	1.71	1117.22	.42	.28	1.53
SELF-ESTEEM	257.23	98007.35	64.30	24.60	2.61*
WORK ORIENTATION	1.66	907.73	.41	.22	1.82

*$p<.05$

Note: Univariate F-tests with (4,3984) d.f.; Weekly hours of work treated as a five-level independent variable (Not employed; 1-10 hours; 11-15 hours; 16-20 hours; more than 20 hours).

Table 6

Means and Standard Deviations of Dependent Variables for Each Work Status Group, and Magnitude of Difference (d) Between Students Working 1-10 Hours Versus More than 20 Hours Weeky

	School-Related Outcomes					
Work Status[a]	Grade-Point-Average		Homework		Extracurriculars	
	M	*sd*	*M*	*sd*	*M*	*sd*
not employed	2.991	.742	3.585	1.128	3.739	1.136
1-10 hours	3.051	.712	3.694	1.140	3.673	1.165
11-15 hours	2.922	.703	3.434	.994	3.723	1.126
16-20 hours	2.856	.681	3.351	1.064	3.577	1.142
21+ hours	2.679	.730	3.076	1.030	3.500	1.106
d[b]	.52		.57		.15	

	Concentration		Effort		Paying Attention	
	M	*sd*	*M*	*sd*	*M*	*sd*
not employed	3.540	.866	3.877	.852	3.967	.719
1-10 hours	3.520	.842	3.818	.876	3.991	.695
11-15 hours	3.499	.836	3.773	.833	3.910	.640
16-20 hours	3.466	.875	3.713	.919	3.892	.775
21+ hours	3.473	.876	3.772	.880	3.871	.737
d	.05		.05		.17	

Table 6 (continued)

	Class-cutting		Mind-Wandering		School Misconduct	
	M	sd	M	sd	M	sd
not employed	1.337	.603	2.545	.842	7.093	1.990
1-10 hours	1.347	.630	2.553	.819	7.256	2.012
11-15 hours	1.439	.642	2.663	.813	7.504	1.932
16-20 hours	1.486	.718	2.616	.854	7.391	2.066
21+ hours	1.607	.765	2.737	.872	7.281	2.022
d	.37		.22		.01	

Psychological and Behavioral Dysfunction

	Drug Use		Delinquency		Psychological Distress		Psychosomatic Complaints	
	M	sd	M	sd	M	sd	M	sd
not employed	8.018	3.643	8.151	2.353	20.189	6.236	10.624	3.13
1-10 hours	8.318	3.582	8.087	2.120	20.232	6.097	10.646	2.98
11-15 hours	9.252	4.054	8.186	2.166	21.329	6.317	10.776	3.06
16-20 hours	9.221	4.164	8.544	2.925	21.826	6.236	11.063	3.03
21+ hours	9.426	3.918	8.565	2.549	22.160	6.600	11.274	3.33
d	.30		.20		.30		.20	

Table 6 (continued)

Psychosocial Maturity

	Work Orientation		Self-Esteem		Self-Reliance	
	M	sd	M	sd	M	sd
not employed	2.801	.485	29.974	4.981	3.070	.526
1-10 hours	2.823	.460	30.647	4.962	3.104	.523
11-15 hours	2.782	.442	29.931	4.409	3.076	.507
16-20 hours	2.762	.474	30.324	5.064	3.128	.512
21+ hours	2.758	.478	29.837	5.130	3.059	.579
d	.14		.16		.08	

Autonomy from Parents

	Family Time		Behavioral Control		Youthful Decision-Making	
	M	sd	M	sd	M	sd
not employed	6.771	2.393	.747	.125	.456	.243
1-10 hours	6.872	2.349	.734	.125	.478	.233
11-15 hours	6.368	2.474	.731	.128	.488	.242
16-20 hours	5.830	2.722	.714	.132	.518	.245
21+ hours	5.764	2.764	.695	.141	.544	.252
d	.43		.29		.27	

[a]Note: Group sample sizes are as follows: not employed (N=2212), employed 1-10 hours weekly (N=531), employed 11-15 hours weekly (N=340), employed 16-20 hours weekly (N=413), and employed more than 20 hours weekly (N=493).

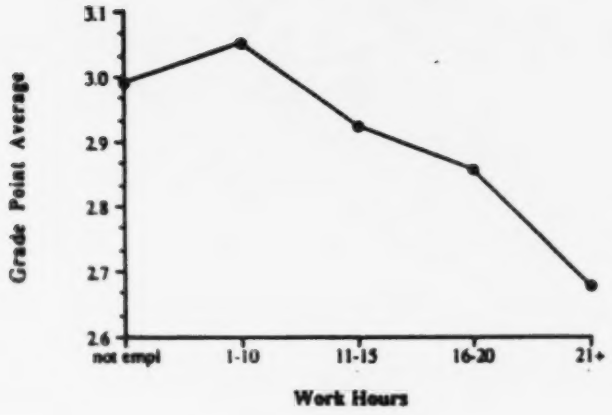
[b]Note: The d statistic reflects the magnitude of the difference between workers employed for 1-10 hours per week versus 21+ hours weekly.

Figure Captions

1. Relation between weekly hours of work and grade-point average, time spent on homework, and class-cutting.

2. Relation between weekly hours of work and drug use and psychological symptoms.

3. Relation between weekly hours of work and parental monitoring.


Grade Point Average
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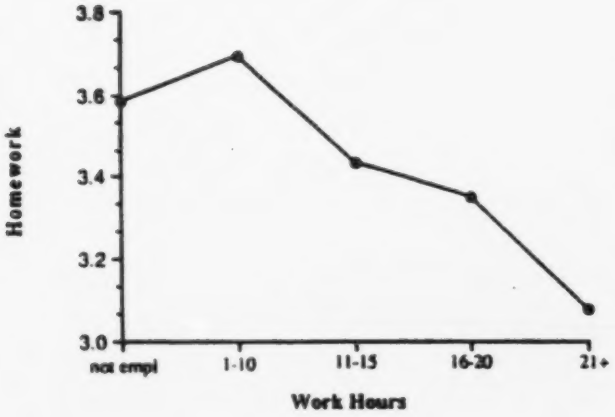
2.9
2.8
2.7
2.6
not empl
1-10
11-15
16-20
21+
Work Hours


Homework
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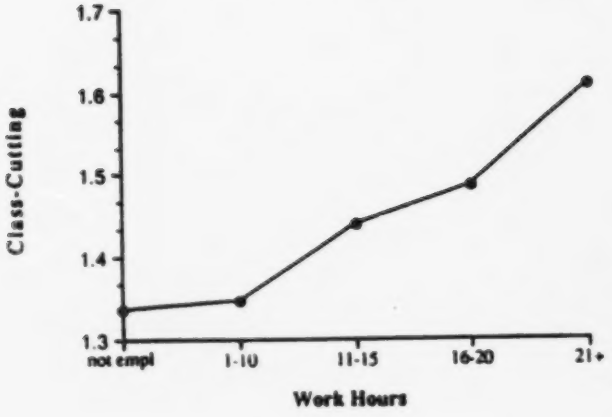
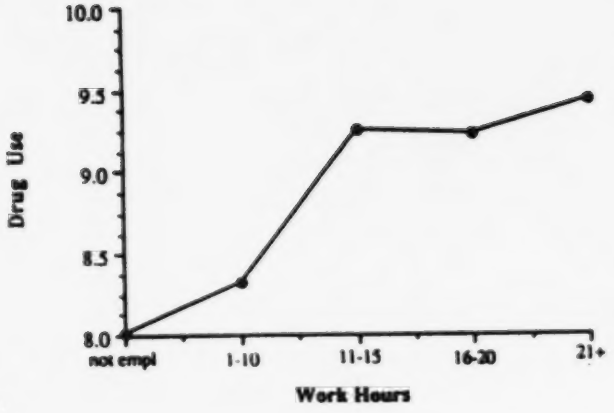
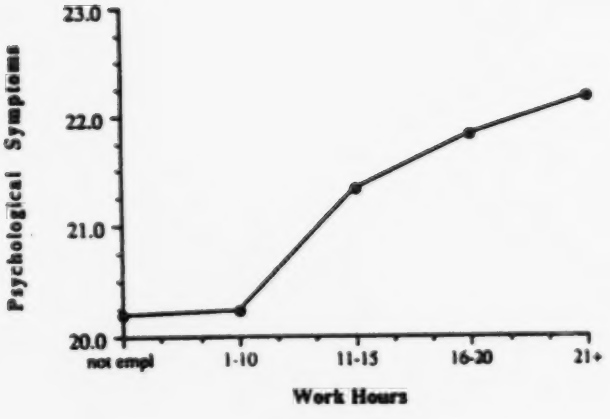
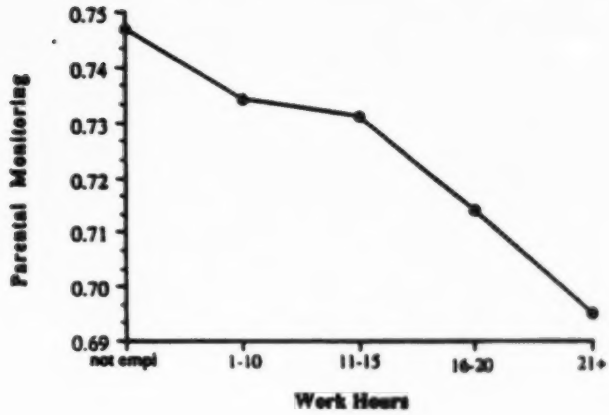
3.6
3.4
3.2
3.0
not empl
1-10
11-15
16-20
21+
Work Hours


Class-Cutting
1.7
1.6
1.5
1.4
1.3
not empl
1-10
11-15
16-20
21+
Work Hours


10.0
9.5
9.0
8.5
8.0
Drug Use
not empl
1-10
11-15
16-20
21+
Work Hours


23.0
22.0
21.0
20.0
Psychological Symptoms
not empl
1-10
11-15
16-20
21+
Work Hours


0.75
0.74
0.73
0.72
0.71
0.70
0.69
Parental Monitoring
not empl
1-10
11-15
16-20
21+
Work Hours